PROJECT PRESENTATION

Customer segmentation using machine learning

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Outline

- Problem Statement
- Proposed System/Solution
- System Development Approach
- Algorithm & Deployment
- Results
- Conclusion
- Future Scope
- References

Problem Statement

- Customer segmentation is crucial for businesses to tailor their marketing strategies and improve customer satisfaction.
- Aim: Segment customers based on tenure, monthly charges, and total charges using machine learning techniques.

Proposed Solution

- Components:
- Data Collection: Gathered data from 'Customer_Segmentation.csv‘ containing tenure, monthly charges, total charges, and churn status.
- Data Preprocessing: Handled missing values and outliers, filled missing values, and standardized numerical features.

System Development Approach

- Exploratory Data Analysis (EDA):
- Scatter plot for tenure vs. monthly charges.
- Pie chart for tenure distribution.
- Line graph for tenure vs. total charges.
- Feature Engineering:
- Standardized and normalized numerical features using Standard Scaler and MinMax Scaler.

Algorithm & Deployment

- Model Building:
- Split data into training and test sets.
- Built a Random Forest classifier using standardized features.
- Trained and evaluated the model.

Results

- Model Performance:
- Achieved an accuracy of [77.74%].
- Insights from model evaluation and performance metrics.

Conclusion

- Summary:
- Importance of customer segmentation for businesses.
- Machine learning aids in automating segmentation and improving marketing strategies.
- Future Work:
- Further analysis to improve model performance.
- Exploration of other segmentation techniques.

FUTURE SCOPE

- Potential enhancements:
- Incorporating additional data sources.
- Optimizing algorithms for better performance.
- Expanding the system to cover multiple regions.

References

- Relevant sources, research papers, and articles used for developing the solution.

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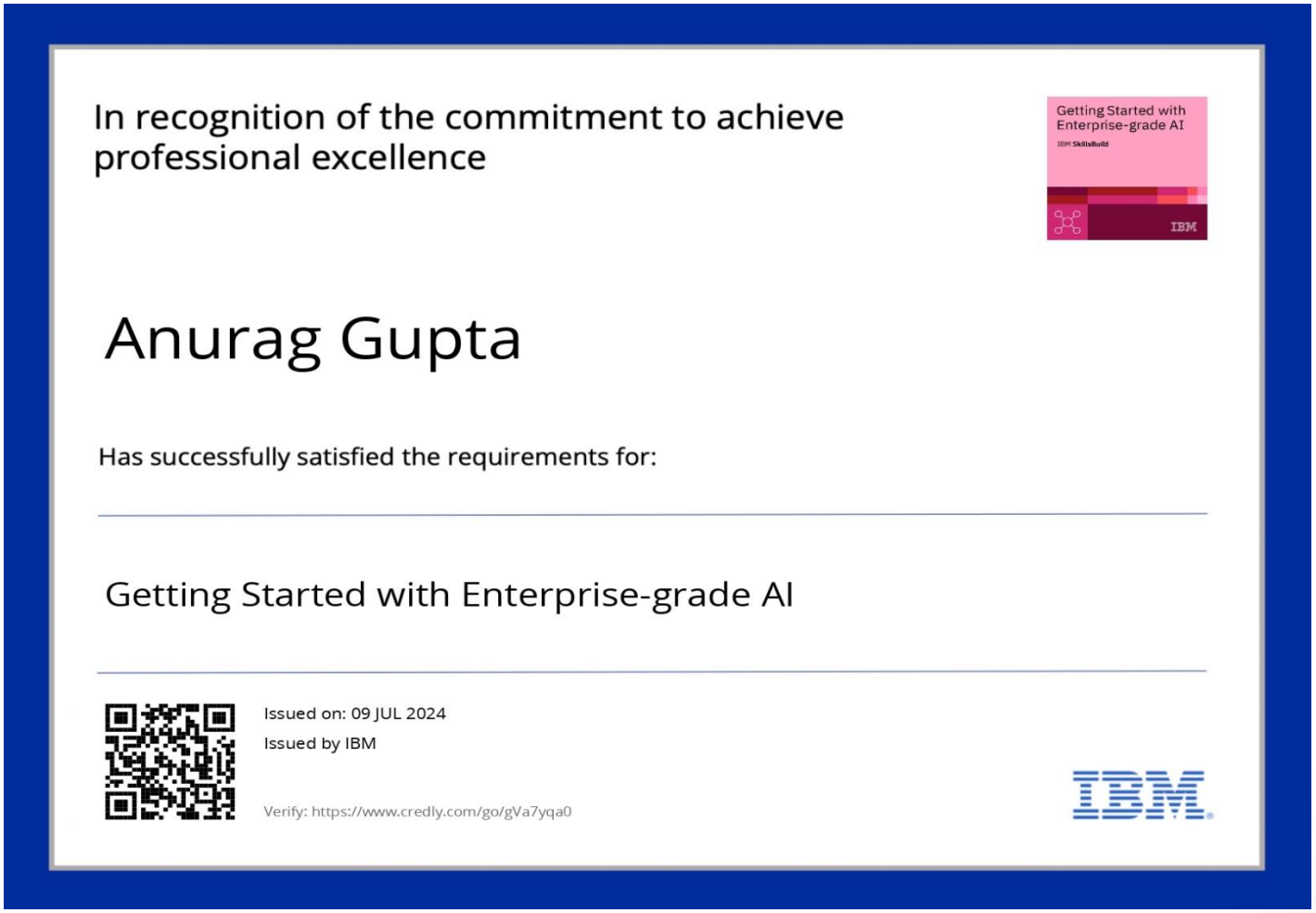

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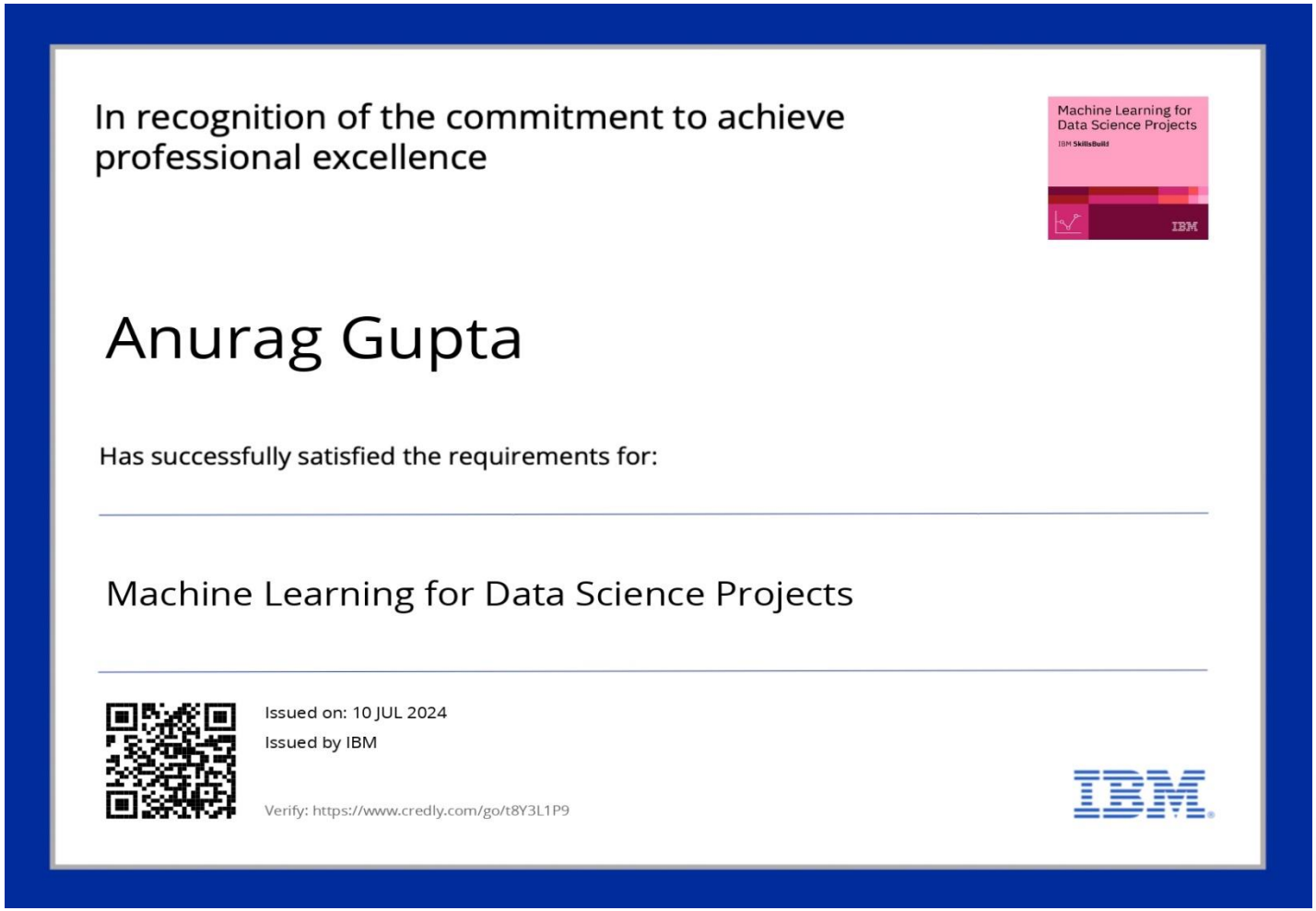

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